

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A computer program product, tangibly embodied in a non-transitory computer-readable storage medium, comprising instructions operable on a computer to:

provide a user interface for a computer program application, the user interface being operable to receive input from a user interacting with the computer controls in the user interface and, from the input, to generate user interaction events;

identify one or more future user interaction events that may occur while the user interface is in a current user interface state, the current user interface state comprising one or more controls enabling user input, the controls comprising one or more current properties;

estimate a likelihood for the future user interaction events to occur based on a history of previous user inputs to the user interface;

select one or more of the future user interaction events to pre-process based on the estimated likelihoods that the future user interaction events will occur;

~~generate, while the user interface is in the current user interface state, properties of future user interface states, the future user interface states corresponding to the selected future user interaction events;~~

pre-process, while the user interface is in the current user interface state, the selected future user interaction events to generate the corresponding one or more future user interface states, the future user interface states comprising one or more future properties of

~~the controls in the current user interface state based on the
generated properties of the corresponding future user interface
states;~~

pre-render, while the user interface is in the current user interface state,
future user interface appearances corresponding to the generated
future user interface states; and

store the pre-rendered future user interface appearances for later use.

2. (Previously Presented) The product of claim 1, further comprising instructions to:
receive an actual input from the user and, if a first one of the future user
interface states corresponds to the actual input, display the future
user interface appearance corresponding to the first user interface
state.
3. (Cancelled).
4. (Previously Presented) The product of claim 2, further comprising instructions to
generate code to render the first user interface state.
5. (Previously Presented) The product of claim 4 wherein the code to render the
first user interface state comprises HTML (Hypertext Markup Language) code.
6. (Cancelled).
7. (Previously Presented) The product of claim 1, further comprising instructions to:

specify an order for pre-processing the future user interaction events
based on the estimated likelihoods that the future user interaction
events will occur.

8. (Cancelled).
9. (Currently Amended) The product of claim 1, wherein:
the user interface comprises ~~a control~~ having instructions to establish the
estimated likelihoods for the future user interaction events.
10. (Cancelled).
11. (Previously Presented) The product of claim 1, wherein:
the instructions to pre-process the selected future user interaction events
comprise instructions to obtain data from the computer program
application for the generated future user interface states.
12. (Previously Presented) The product of claim 1, wherein each of the selected
future user interaction events has estimated likelihoods of occurrence exceeding
a threshold probability, and the future user interaction events other than the
selected future user interaction events have estimated likelihoods that do not
exceed the threshold probability.
13. (Previously Presented) The product of claim 1, wherein:
the computer program product is a program running on a server computer
in data communication with a client computer; and

the instructions to provide a user interface comprise instructions to provide the user interface in a Web browser.

14. (Currently Amended) A computer-implemented method, comprising the steps implemented by one or more computers of:

providing, by the one or more computers, a user interface for a computer program application, the user interface being operable to receive input from a user interacting with the one or more computers controls in the user interface and, from the input, to generate user interaction events;

identifying, by the one or more computers, one or more future user interaction events that may occur while the user interface is in a current user interface state, the current user interface state comprising one or more controls enabling user input, the controls comprising one or more current properties;

estimating, by the one or more computers, a likelihood for the future user interaction events to occur based on a history of previous user inputs to the user interface;

selecting, by the one or more computers, one or more of the future user interaction events to pre-process based on the estimated likelihoods that the future user interaction events will occur;

generating, ~~by one or more computers and while the user interface is in the current user interface state, properties of future user interface states, the future user interface states corresponding to the selected future user interaction events;~~

pre-processing, by the one or more computers and while the user interface is in the current user interface state, the selected future user interaction events to generate the corresponding one or more

future user interface states, the future user interface states comprising one or more future properties of the controls in the current user interface state based on the generated properties of the ~~corresponding future user interface states~~;

pre-rendering, by the one or more computers and while the user interface is in the current user interface state, future user interface appearances corresponding to the generated future user interface states; and

storing, by the one or more computers, the pre-rendered future user interface appearances for later use,

15. (Previously Presented) The method of claim 14, further comprising:
receiving an actual input from the user and, if a first one of the future user interface states corresponds to the actual input, displaying the future user interface appearance corresponding to the first user interface state.
16. (Cancelled).
17. (Previously Presented) The method of claim 14, further comprising:
specifying an order for pre-processing the future user interaction events based on the estimated likelihoods that the future user interaction events will occur.
18. (Currently Amended) An apparatus, comprising:
a processor for executing program instructions; and

a computer-readable storage medium storing the program instructions, the program instructions, when executed by the processor, performing a process comprising:

providing a user interface for a computer program application, the user interface being operable to receive input from a user interacting with the apparatus controls in the user interface and input_i to generate user interaction events;

identifying one or more future user interaction events that may occur while the user interface is in a current user interface state, the current user interface state comprising one or more controls enabling user input, the controls comprising one or more current properties;

estimating a likelihood for the future user interaction events to occur based on a history of previous user inputs to the user interface;

selecting one or more of the future user interaction events to pre-process based on the estimated likelihoods that the future user interaction events will occur;

~~generating, while the user interface is in the current user interface state, properties of future user interface states, the future user interface states corresponding to the selected future user interaction events;~~

pre-processing, while the user interface is in the current user interface state, the selected future user interaction events to generate the corresponding one or more future user interface states, the future user interface

states comprising one or more future properties of the controls in the current user interface state based on the generated properties of the corresponding future user interface states;

pre-rendering, while the user interface is in the current user interface state, future user interface appearances corresponding to the generated future user interface states; and

storing the pre-rendered future user interface appearances for later use.

19. (Previously Presented) The apparatus of claim 18, the process further comprising:

receiving an actual input from the user and, if a first one of the future user interface states corresponds to the actual input, displaying the future user interface appearance corresponding to the first user interface state.

20. (Cancelled).

21. (Previously Presented) The apparatus of claim 19, the process further comprising:

specifying an order for pre-processing the future user interaction events based on the estimated likelihoods that the future user interaction events will occur.

22. (Previously Presented) The product of claim 12, further comprising instructions for raising or lowering the threshold probability.